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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,063	10/05/2005	Koichiro Oiyama	2005_1432A	6099

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EXAMINER
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LEE, GILBERT Y

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,063	<b>Applicant(s)</b> OIYAMA ET AL.	
	<b>Examiner</b> Gilbert Y. Lee	<b>Art Unit</b> 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/5/05</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because the abstract exceeds the 150 word maximum. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2 and 4, it is unclear to the examiner as to what end the applicant is claiming. For the purposes of this examination, the examiner is interpreting the claim to be claiming the free end of the lip.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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3. Claims 1, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hosokawa et al. (US Pub. No. 2001/0030398 A1).

Regarding claim 1, the Hosokawa et al. reference discloses a lip-type seal (Fig. 1) with which an outer periphery of a shaft (32) supported by a predetermined housing (32) is sealed (Fig. 1), the lip-type seal comprising:

a seal ring (5) made of an elastic material (para. [0036]) so as to define an annular fitted part (e.g. 5a) and a lip part (13), the annular fitted part being fitted to a hole (Fig. 1) of the housing, the lip part extending from the fitted part inwardly in a radial direction in the shape of a substantially conical ring (Fig. 1) and being brought to contact with the shaft (Fig. 1); and

a support ring (12) including an annular joint part (e.g. part in contact with element 1) and an annular supporting part (e.g. 12a), the annular supporting part defining a hole (Fig. 1) through which the shaft passes, extending from a side of the joint part to a halfway area of the lip part (Fig. 1), and supporting the lip part from an inside in the radial direction (Fig. 1),

wherein the lip part is tapered in cross section (Fig. 1) from an area from which noncontact with the supporting part starts toward an end thereof.

Regarding claim 5, the Hosokawa et al. reference discloses the supporting part of the support ring being bent (Fig. 1) so as to be convex toward a side of the lip part (Fig. 1).

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Regarding claim 6, the Hosokawa et al. reference discloses the lip part of the seal ring being 85 degrees to 98 degrees in material hardness according to JIS hardness.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosokawa et al.

Regarding claim 2, the Hosokawa et al. reference, as best understood, discloses the claimed invention except for the ratio of the thickness of the area from which noncontact with the support part of the supporting ring starts and the thickness of the end being between 0.3 and 0.7. Discovering an optimum range of a result effective variable involves only routine skill in the art. In re Kulling, 895 F.2d 1147, 14 USPQ 2d 1056. Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a mechanical expedient. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the lip having a ratio of the thickness of the area from which noncontact with the support part of the supporting ring starts and the thickness of the end being between 0.3 and 0.7 as a matter of mechanical expedience.

Regarding claim 3, the Hosokawa et al. reference discloses the claimed invention except for the ratio of the inner diameter of the end of the lip part and the outer diameter of the shaft being between 0.03 and 0.15. Discovering an optimum range of a result effective variable involves only routine skill in the art. In re Kulling, 895 F.2d 1147, 14 USPQ 2d 1056. Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of mechanical expedience. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ratio of the inner diameter of the end of the lip part and the outer diameter of the shaft be between 0.03 and 0.15 as a matter of mechanical expedience.

Regarding claim 4, the Hosokawa et al. reference, as best understood, discloses the claimed invention except the ratio of the thickness of the area from which noncontact with the support part of the supporting ring starts and the thickness of the end being between 0.3 and 0.7 and the ratio of the inner diameter of the end of the lip part and the outer diameter of the shaft being between 0.03 and 0.15. Discovering an optimum range of a result effective variable involves only routine skill in the art. In re Kulling, 895 F.2d 1147, 14 USPQ 2d 1056. Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of mechanical expedience. It would have been obvious to one having ordinary skill in the art at the time the invention was made have the lip having a ratio of the thickness of the area from which noncontact with the support part of the supporting ring starts and the thickness of the end being between 0.3 and 0.7

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and to have the ratio of the inner diameter of the end of the lip part and the outer diameter of the shaft be between 0.03 and 0.15 as a matter of mechanical expedience.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gilbert Lee whose telephone number is 571-272-5894. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GL  
September 28, 2006

A handwritten signature in black ink, appearing to read "Patricia Engle", with a stylized flourish at the end.

Patricia Engle  
Supervisory Examiner  
Tech. Center 3600